

Patent Claims

1. Method of reducing the draft effect of a flue duct upon an upstream exhaust gas cleaning system,

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characterized in that,

a downwardly open flue duct (1;1') is allowed to be immersed into a vat in such a way that, with the aid of a liquid (condensate) that collects in the vat, a liquid barrier that closes off a flue gas end of the flue duct relative to the environment is formed; and

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for relieving the upstream exhaust gas cleaning system from the flue duct draft effect (chimney draft), at least a portion of the cross-section of the flue duct is exposed by lowering the level of the liquid below the edge of the flue duct.

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2. Method according to claim 1, characterized in that the vat is lowered together with the liquid to lower the level of the liquid.

3. Method according to claim 2, characterized in that a trough (12) that is associated with the lower end of the flue duct and outwardly delimits a discharge plate (11) is used as the vat.

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4. Method according to claim 3, characterized in that the liquid is allowed to flow over an outer wall of the trough in the manner of a weir (17).

5. Method according to claim 2, characterized in that a plurality of different peripheral regions of the trough (12) have associated therewith overflow weirs (17) by means of which the trough liquid can overflow outwardly and the trough is drained.

5 6. Method according to one of the claims 3-5, characterized in that the depth of immersion (20) of the flue duct (1) into the trough (12) is adjusted by vertical positioning of the trough.

10 7. Method according to one of the claims 3-6, characterized in that to reestablish the chimney draft in the exhaust gas cleaning system, the trough (12) and the discharge plate (11) are vertically delivered to the lower end (3) of the flue duct to such an extent that the flue duct extends into the trough liquid to a prescribed depth (20).

15 8. Method according to claim 7, characterized in that the depth of immersion (20) is adjusted by varying the vertical feed of the trough (12).

9. Method according to one of the claims 3-8, characterized by the use with an open exhaust gas cleaning system.

10. Arrangement for reducing the draft effect of a flue duct (the chimney draft) upon an upstream exhaust gas cleaning system,

20 characterized in that,

a downwardly open flue duct (1;1') can be immersed into a vat;

by means of a liquid (condensate) collected in the vat, a liquid barrier as a closure of the flue gas end of the flue duct relative to the environment is formed; and

the level of the liquid can be lowered below the edge of the flue duct to thereby expose at least a portion of the cross-section of the flue duct in order to relieve the upstream exhaust gas cleaning system from the flue duct draft effect.

11. Arrangement according to claim 10, characterized in that for the lowering of the level of the liquid, the vat can be vertically lowered relative to the flue duct.

12. Arrangement according to claim 11, characterized in that the vat is embodied as a trough (12) that is connected in a gas tight manner with an outwardly inclined discharge plate (11) to form an assembly (10).

13. Arrangement according to claim 12, characterized in that the discharge plate (11) that is connected with the liquid-conveying trough (12) has a pyramidal, conical, or spherical configuration, and provides for a discharge of the liquid into the liquid-conveying trough (12), whereby the discharge is distributed over the periphery.

14. Arrangement according to claim 12 or 13, characterized in that the discharge plate assembly (10), which is comprised of discharge plate (11) and trough (12), is supported on the flue duct (1;

1') via a support apparatus (6, 14, 16), the length of which can be varied.

15. Arrangement according to claim 14, characterized in that the support apparatus is provided with a plurality of lifting mechanisms (16) that are distributed over the periphery of the trough.

16. Arrangement according to claim 14 or 15, characterized in that the discharge plate assembly (10) is secured via length variable tie rods (14) to the flue duct (1) in such a way that a closure relative to the environment at the flue gas end is ensured.

10 17. Arrangement according to one of the claims 12 to 16, characterized in that at a plurality of regions distributed over the periphery of the trough, overflow weirs (17) having a uniform weir height are disposed.

15 18. Arrangement according to claim 17, characterized in that liquid discharge means (18) are disposed downstream of said overflow weirs.

19. Arrangement according to one of the claims 12 to 18, characterized in that openings for the chimney draft air are formed in the flue duct, with the openings being closable via air supply shutters or louvers, and/or via sliding doors.